



Higher National Graded Unit specification

General information for centres

This Graded Unit has been validated as part of the HND Environmental Management and Sustainability. Centres are required to develop the assessment instrument in accordance with this validated specification. Centres wishing to use another type of Graded Unit or assessment instrument are required to submit proposals detailing the justification for change for validation.

Graded Unit title: Environmental Management and Sustainability:
Graded Unit 3

Graded Unit code: F6VA 35

Type of Graded Unit: Examination

Assessment Instrument: Closed-book Examination

Credit points and level: 1 HN credit at SCQF level 8: (8 SCQF credit points at SCQF level 8*)

**SCQF credit points are used to allocate credit to qualifications in the Scottish Credit and Qualifications Framework (SCQF). Each qualification in the Framework is allocated a number of SCQF credit points at an SCQF level. There are 12 SCQF levels, ranging from Access 1 to Doctorates.*

Purpose: This Graded Unit is designed to provide evidence that the candidate has achieved the following principal aims of the HND Environmental Management and Sustainability:

- ◆ To increase candidate's awareness and understanding of key environmental issues
- ◆ To ensure that candidates have a sound understanding of the principles of sustainable development and environmental management
- ◆ To provide a sound understanding of the relevance of environmental science and management principles in addressing environmental issues
- ◆ To provide candidates with a sound understanding of environmental impacts and ways of managing and minimising those impacts
- ◆ To facilitate progression to degree level education based on a firm foundation of understanding, technical expertise, Core Skills, and an understanding of the multidisciplinary nature of environmental management and managing environmental impacts

Higher National Graded Unit specification

General information for centres (cont)

Recommended prior knowledge and skills: It is recommended that the candidate should have completed or be in the process of completing the following Units relating to these specific aims prior to undertaking this Graded Unit:

Unit code	Unit
F6D0 35	Environmental Management Systems
F5T5 35	Environmental Science: An Introduction
F55S 35	Waste Management and Pollution Control
F2X3 35	Data Collection and Handling
F6CY 35	Resource Economics
F435 35	Freshwater Environments: Management and Protection

Core Skills: There are no Core Skills embedded in this Graded Unit specification.

Context for delivery: If this unit is delivered as part of a group award, it is recommended that it should be taught and assessed within the subject area of the group award to which it contributes.

The Assessment Support Pack (ASP) for this unit provides assessment and marking guidelines that exemplify the national standard for achievement. It is a valid, reliable and practicable assessment. Centres wishing to develop their own assessments should refer to the ASP to ensure a comparable standard. A list of existing ASPs is available to download from SQA's website (<http://www.sqa.org.uk/sqa/46233.2769.html>).

Assessment: This examination-based Graded Unit is a closed-book examination. It will consist of a written examination of 3 hours in total.

Administrative Information

Graded Unit code: F6VA 35

Graded Unit title: Environmental Management and Sustainability:
Graded Unit 3

Original date of publication: May 2009

Version: 01

History of changes:

Version	Description of change	Date

Source: SQA

© Scottish Qualifications Authority 2009

This publication may be reproduced in whole or in part for educational purposes provided that no profit is derived from reproduction and that, if reproduced in part, the source is acknowledged.

SQA acknowledges the valuable contribution that Scotland's colleges have made to the development of Higher National qualifications.

Additional copies of this Graded Unit specification (if sourced by the Scottish Qualifications Authority), can be purchased from the Scottish Qualifications Authority. Please contact the Customer Contact Centre for further details, telephone 0845 279 1000.

Higher National Graded Unit specification: instructions for designing the assessment task and assessing candidates

Graded Unit title: Environmental Management and Sustainability:
Graded Unit 3

Conditions of assessment

The assessment is based on a closed-book examination lasting 3 hours.

If a candidate does not achieve a pass or if a candidate wishes to upgrade, this must be based on a significantly different examination from that given originally. A candidate's grade will be based on his/her achievement on the new assessment event using a significantly different examination, if this results in a higher grade.

The examination should be unseen and the assessment should be conducted in controlled and invigilated conditions.

At all times, the security, integrity and confidentiality of examinations must be ensured.

Instructions for designing the assessment task:

The examination should be designed to assess the candidate's critical knowledge and understanding of the topics relating to the specific aims which this Graded Unit is designed to cover. The questions and corresponding marks should be designed in accordance with the ranges indicated in the table that follows. However, the overall total mark for the examination is 100.

It is suggested that the assessment is based on two separate, consecutive closed-book examinations, each of 1.5 hours duration. Both examinations must cover all key topic areas. The first examination should consist of a paper incorporating restricted response type questions. The second paper should be made up of extended response questions. A list of key topics and weightings is provided in the table which follows.

The format of the examination should be designed to conform to the following:

- ◆ Each examination must be closed-book and supervised and last 1.5 hours.
- ◆ The examination papers must contain a choice of at least two questions from each Key Topic.
- ◆ The aggregate marks available for the question or questions in each topic area must conform to the weightings given in the table which follows.
- ◆ Each question should have an associated mark
- ◆ A blend of question types is to be used for each key topic. One examination paper should involve restricted response questions for each of the key topic areas. The other examination should involve more extended response questions.
- ◆ Candidates are expected to attempt all sections of the examination papers.
- ◆ A mark must be achieved in each section of each examination paper.

Higher National Graded Unit specification: instructions for designing the assessment task and assessing candidates (cont)

Topic areas for examination questions

Key topics	Level of demand	Percentage weighting for each topic
<i>Environmental issues and human interactions</i> (climate change, waste and pollution, transportation, biodiversity, conservation, legislation)	Evaluate environmental issues and human interactions and discuss the need for environmental protection policies.	35%
<i>Principles of environmental management and sustainability</i> (sustainable development, Environmental Management Systems, environmental policy and auditing, ecological footprints, SMART targets)	Critically appraise principles of sustainable development and environmental management, and evaluate their effectiveness.	35%
<i>Mitigation of environmental impacts</i> (identifying and monitoring impacts, strategies to reduce or mitigate impacts)	Evaluate environmental management strategies as a means of mitigating identified environmental impacts.	30%

Each examination will be marked out of 100%. Assessors will aggregate the marks achieved by the candidate to arrive at an overall mark for the examination. Assessors will then assign a grade to the candidate for this Graded Unit based on the following grade boundaries:

- ◆ A = 70% — 100%
- ◆ B = 60% — 69%
- ◆ C = 50% — 59%

To pass the examination and achieve the Graded Unit, the candidate must achieve a mark of 50% or above and attain the minimum Evidence Requirements.

Higher National Graded Unit specification: instructions for designing the assessment task and assessing candidates (cont)

Guidance on grading candidates

Candidates who meet the minimum Evidence Requirements will have their achievement graded as a C (competent), A (highly competent), or B (somewhere between A and C). The grade related criteria to be used to judge candidate performance for this Graded Unit is specified in the following table:

Grade A	Grade C
Is a seamless, coherent exam script which consistently:	Is a co-ordinated exam script which:
◆ interprets and understands the question in a way that demonstrates insight and clear understanding of issues and relationships	◆ interprets the question in a way that enables the candidate to meet the minimum Evidence Requirements
◆ comprehensively addresses all aspects of the question	◆ addresses the main issues of the question
◆ demonstrates a comprehensive analysis and evaluation of relevant information	◆ demonstrates analysis and evaluation
◆ offers logically structured and coherently expressed responses, demonstrating consistent use of correct terminology	◆ offers responses that convey relevant points
◆ has a clear structure throughout and uses language and terminology of a consistently high standard in terms of level, accuracy and technical content	◆ uses language and terminology appropriately, in terms of level, accuracy and technical content
◆ provides solutions to problems which are realistic and attention is paid to practicality and viability	◆ contains solutions to problem which are feasible and gives due regard to practicality and viability
◆ argues and shows links between discussions and conclusions, demonstrating comprehensive knowledge and understanding as well as analysis and evaluation skills	◆ argues and justifies conclusions with some links to discussions
◆ provides evidence of possible alternative approaches and arguments as well as an understanding of different interpretations	◆ demonstrates an approach containing different interpretations

Higher National Graded Unit specification: instructions for designing the assessment task and assessing candidates (cont)

Support notes

The Graded Unit for this award consists of three hours of closed-book examination covering three key topics. The examination is held as two separate events, both undertaken under the same closed-book conditions and both containing a spread of questions covering the key topic areas. The questions associated with each key topic should be focussed on knowledge and skills that candidates should be expected to be able to readily recall, integrate and apply. The purpose of the examination is, in part, to prove the candidates' ability to integrate information gleaned from the Units that comprise the course, but also it provides the opportunity for candidates to achieve a grade for the examination that reflects the depth and scope of their knowledge and understanding.

The defined mandatory Units could be scheduled for the first and second terms so that candidates have time to consolidate and deepen their knowledge and understanding by private study and background reading before the examination towards the end of the academic session.

It would be beneficial if candidates gained experience of an examination type assessment event during the delivery of the Group Award so that they feel comfortable with the format. There could be discussions with candidates on examination technique, which should include the timing, the significance of the verbs used in questions, the need to ascertain the scope of the question, and planning responses. Feedback on sample responses (formative assessment) would sharpen their examination techniques.

The examination should be completed under normal examination conditions. That is at a defined time advertised well in advance, in a quiet venue with effective invigilation facilities. Candidates should be provided with clear information regarding examination resits.

Disabled candidates and/or those with additional support needs

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering whether any reasonable adjustments may be required. Further advice can be found on our website www.sqa.org.uk/assessmentarrangements

General information for candidates

Graded Unit title: Environmental Management and Sustainability:
Graded Unit 3

Graded Unit code: F6VA 35

This is a single credit Graded Unit (examination) at SCQF level 8.

This Graded Unit is designed to assess your ability to recall, integrate and apply the essential knowledge and understanding required to meet the principal aims of the HND Environmental Management and Sustainability. The assessment is two closed-book examinations lasting a total of 3 hours, held towards the end of the course, which draws together elements from the following defined Units of the Environmental Management and Sustainability programme:

Unit code	Unit
F6D0 35	Environmental Management Systems
F5T5 35	Environmental Science: An Introduction
F55S 35	Waste Management and Pollution Control
F2X3 35	Data Collection and Handling
F6CY 35	Resource Economics
F435 35	Freshwater Environments: Management and Protection

The examination consists of questions in areas related to key areas of the Units above. These areas are:

- ◆ Environmental issues and human interactions
- ◆ Principles of environmental management and sustainability
- ◆ Mitigation of environmental impacts

Each question has the marks for the question identified and the total number of marks available per section. Assessors mark each section of the examination paper taking into account the criteria outlined. The marks for the examination are then aggregated to arrive at an overall mark for the examination. Assessors then assign an overall grade to you for this Graded Unit based on the following grade boundaries:

- ◆ A = 70% — 100%
- ◆ B = 60% — 69%
- ◆ C = 50% — 59%

Candidates who fail the examination and are offered a resit opportunity will undertake a substantially different question paper.